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Stephen R. Lawrence

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EXAMINER

LU, CHARLES EDWARD

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/676,711

**Applicant(s)**

LAWRENCE, STEPHEN R.

**Examiner**

CHARLES E. LU

**Art Unit**

2161

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6-30, 32-46 and 48-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-30, 32-46 and 48-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Action is in response to the Amendment dated 4/27/2009. Claims 1-4, 6-30, 32-46, and 48-62 are pending and rejected.

#### ***Response to Amendments/Response to Arguments***

2. Applicant's arguments regarding the 35 USC 103 rejections were fully considered.

Applicant argues that Breese, Konig, and Li do not teach or suggest "accessing a user profile for a user, wherein content of the user profile is generated from user information that includes information derived from anchor text contained in documents that link to documents accessed by the user" (Remarks, p. 14). The examiner respectfully disagrees.

First, Breese and Konig already teach or suggest a user profile for the user generated from user information, as discussed below. As to the remaining subject matter regarding the profile "including information derived from anchor text contained in documents that link to documents accessed by the user, " the combination of references would teach or suggest the claimed subject matter. Specifically, Li teaches or suggests being able to use information derived from anchor text contained in a document that links to another document, as shown below, to help identify popular or otherwise relevant pages (see below). Breese and Konig teach or suggest that a given document may be a document that was accessed by a user. The motivation for using Li to include information derived from anchor text in the user profile would have been to facilitate

recognizing a popular or relevant page, as taught by Li and known to one of ordinary skill in the art.

Applicant further argues that Breese and Konig do not teach or suggest generating a personalized query strategy and selecting a personalized set of document according to the strategy (Remarks, p. 15). These arguments were addressed in a prior action. It should be noted that the broadest reasonable interpretation has been applied to the claims and Applicant is arguing limitations that are not in the claim.

3. For at least the above reasons, the prior art rejection of the claims is maintained.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**4. Claims 1-4, 6-7, 9-20, 22-24, 27-30, 32-33, 35-46, 48-49, and 51-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breese et al (U.S. Patent 6,006,218), hereafter “Breese,” in view of Konig et al (U.S. Patent 6,981,040), hereafter “Konig,” further in view of Li et al (U.S. Patent 6,647,381), hereinafter “Li.”**

**As to claims 1, 59, and 60-62,** Breese teaches the following claimed subject matter:

A method of personalizing search results of a search engine, comprising:  
accessing a user profile for a user, the content of the user profile generated from

information including user information about the user (e.g., fig. 2B, #224, fig. 5, #500, col. 5, ll. 20-45),

At a search engine system having one or more processors and memory storing programs executed by the one or more processors (fig. 1);

The user information including information derived from a first set of documents (e.g., col. 5, ll. 20-45),

The first set of documents comprising a plurality of documents selected from the set consisting of documents identified by search results from the search engine, documents accessed by the user, documents linked to the documents identified by search results from the search engine, and documents linked to the documents accessed by the user (e.g., col. 5, ll. 20-45; col. 8, ll. 15-30); (now recited in new claims 60-62).

Receiving a search query from the user (col. 6, ll. 60-65);

Identifying a set of search result documents that match the search query (fig. 2C, #230-231);

Assigning a generic score to each document of at least a subset of the set of search result documents (col. 7, ll. 18-45);

Assigning a personalized score to each document of the subset of search result documents in accordance with the generic score assigned to the document and the user profile (col. 7, ll. 18-45, details on col. 8-17);

Ranking the subset of search result documents according to their respective personalized scores (col. 7, ll. 18-45, details on col. 8-17).

Providing the ranked subset of search result documents to a client system associated with the user (e.g., fig. 2C, #236, figs. 1-2).

Breese teaches a set of search result documents and a user profile, as described above, but does not expressly teach updating the user profile based on a document selected by the user from the ranked subset of search result documents, and wherein updating includes analyzing links within a document in the first set of documents and adding information derived from the analyzed links to the user profile.

However, Breese teaches presenting a ranked subset of documents to the user (see above) and updating user information according to the latest user provided information, such as particular site visits (e.g., col. 8, ll. 15-40). Thus, the document selected by a user could be one that was presented to the user. Konig teaches documents selected from the user and analyzing links within a selected document to update a user profile ("user model") because "during updating [of the user model], documents that are of interest to the user...are analyzed.... Through information extraction, links to other documents...are obtained.... Extracted information is processed to initialize or update the user representations in the User Model." (e.g., col. 17, l. 20 – col. 18, l. 9, also see the citations in the Prior Action for previous claim 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breese such that documents selected from user from the set of search results are analyzed and information from links extracted from the documents are used to update the user profile, as claimed. The motivation for maintaining a User Model would have been to enhance the system's knowledge of the

user's interests, as taught by Konig (see e.g., Summary), and as known to one of ordinary skill in the art.

Breese and Konig as applied above teach user information, documents accessed by the user, and analyzing links, but do not expressly teach information derived from anchor text contained in documents that link to the documents accessed by the user.

However, Li teaches being able to use information derived from anchor text contained in documents that link to a document (e.g., col. 9, ll. 7-12, col. 7, ll. 45-65, fig. 2 "Rule 6").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breese and Konig, such that the user information in the profile includes information derived from anchor text in documents that link to the documents accessed by the user. The motivation would have been to facilitate recognizing a popular and/or relevant page, as taught by Li (col. 7, ll. 45-65, col. 4, ll. 42-50) and known to one of ordinary skill in the art.

**As to claims 2 and 3,** Breese as applied above does not expressly teach wherein the first set of documents includes a plurality of documents that have been identified by search results from the search engine and that have/have not been viewed by the user.

However, Breese teaches that the user information includes previous search information (col. 5, ll. 30-33, col. 16, l. 40) and that the search information may include information on the entries that were presented to the user as a result of the search (i.e. search results). Furthermore, Breese states, "it may be assumed that the user is aware

of these entries, or at least the highest ranked entries (col. 16, ll. 34-50).” The user information includes information on previous Internet site access operations (col. 5, ll. 30-35). Thus, Breese suggests that the user may have actually viewed the information because the information was presented to the user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Breese/Konig/Li, such that “wherein the set of documents include a plurality of documents that have been identified by search results from the search engine and that have/have not been viewed by the user” is implemented. The motivation as known to one of ordinary skill in the art would have been to enhance the effectiveness of the retrieval result adjustor, because data regarding actual document views would be used.

**As to claims 4 and 14**, Breese and Li as applied above do not expressly teach updating the user profile by updating a term-based profile of the user profile by identifying a set of terms from a document in the first set of documents, and adding information about the identified set of terms to the term-based profile; and updating a category-based profile of the first user profile by classifying the document into a plurality of categories, and adding information about the plurality of categories to the category-based profile.

However, König teaches updating a term-based, and category-based profile for a user with weights as claimed (col. fig. 4A, fig. 4C, col. 10, l. 51, col. 12, l. 55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breese/Konig/Li, such that the claimed updating



of the term-based and category-based profiles is implemented with appropriate weights associated with each item (see e.g., fig. 4). The motivation for maintaining this information (in a User Model) would have been to enhance the system's knowledge of the user's interests, as taught by König (see e.g., Summary), and as known to one of ordinary skill in the art. This would further enhance search results.

**As to claim 6**, König as applied above further teaches wherein the information derived from the analyzed links that is added to the user profile is added to a link-based profile and includes information about URLs or portions of URLs (fig. 4).

**As to claim 7**, König as applied above further teaches or suggests wherein the link-based profile of the user profile comprises a plurality of URLs and a weight associated with each URL, wherein the weight is based on one or more factors selected from the group consisting of frequency with which the first user visits the URL, time the first user has spent viewing a document associated with the URL and quantity of the first user's scrolling activity at the document; and a plurality of hosts and a weight associated with each host, wherein the weight is based on frequency of the first user's visits to the host (col. 12, ll. 28-54, col. 23, ll. 1-10).

**As to claim 9**, König as applied above further teaches wherein a term in the term-based profile is an expression comprising at least one word and a weight (fig. 4A).

**As to claim 10**, König as applied above further teaches wherein the weight is a weight associated with occurrences of the term in the first set of documents (fig. 4, col. 10, l. 52 – col. 12, l. 55).

**As to claim 11**, Konig as applied above further teaches wherein the weight of a term depends at least partially on the term's term frequency and inverse document frequency in said first set of documents (col. 10, l. 52 – col. 11, l. 20).

**As to claim 12**, Konig as applied above further teaches wherein a category in the category-based profile characterizes at least one aspect of documents in the category and the category is associated with a weight indicative of the category's importance relative to other categories (fig. 4, 7, 8, col. 15, ll. 7-32).

**As to claim 13**, Konig as applied above further teaches wherein the at least one aspect of the documents in the category is selected from the group consisting of: document format, document type, document topic and document origin (e.g., col. 15, ll. 7-15 and see above).

**As to claim 15**, Breese and Li as applied above discloses a user profile and a search engine (e.g., Breese, fig. 1, 5), but do not expressly teach wherein the user profile is stored on a server of the search engine.

However, Konig teaches wherein user profiles are stored on a server of the search engine (fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Breese, Konig, and Li, such that the user profiles are stored on a server of the search engine. The motivation would have been to adapt to the requirements of the user in setting up the search system, or to provide personalized services for simultaneous clients, as taught by Konig (col. 7, ll. 20-25).

**As to claim 16**, Breese as applied above further teaches wherein the user profile is stored on a client associated with the user (col. 4, l. 62, col. 5, ll. 1-2).

**As to claim 17**, Breese and Li as applied above do not expressly teach wherein the user profile corresponds to a respective a group of users.

However, Konig teaches wherein a user is a group of users (col. 20, ll. 24-28, col. 9, ll. 47-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Breese, Konig, and Li, such that the first user is a group of users. The motivation would have been to represent the interest level of a group of users in a document independently of any specific information need, as taught by Konig (col. 9, ll. 47-52).

**As to claim 18**, Breese teaches the following claimed subject matter:

A method of personalizing search results of a search engine, comprising:  
creating a plurality of user profiles for a plurality of users, each user profile including at least a user's identification number and information derived from documents visited by the user (col. 5, ll. 20-45);

Receiving a search query from a user of the plurality of users, the search query including at least one query term (e.g., col. 8, ll. 62-66).

Retrieving a user profile that matches the user's identification number (e.g., col. 5, ll. 25-30, col. 8, ll. 29-31);

Selecting a personalized set of documents from the Internet, according to the personalized query strategy, each document having a generic ranking score based at

least on part on the relevance of the document to the search query, assigning to each document in the set a personalized ranking score based at least in part on the user profile and the document's generic ranking score (discussed above);

Ranking the set of documents according to their generic and personalized ranking scores and providing the ranked set of search result documents to a client system associated with the user (see above).

Breese does not expressly teach the search query including the user's identification number.

However, Breese teaches that a user has a unique identification number for storing user attributes in a user database (col. 5, ll. 20-45), and that information regarding the user and the search to be performed is obtained at the input step 222 (col. 8, ll. 15-20, #224).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breese, such that the search query includes the user's identification number in the input step. The motivation would have been to adapt to specific user requirements in setting up the search engine. For example, one may send the identification with the query to facilitate efficient processing.

Breese teaches a set of search result documents and a user profile, as described above, but does not expressly teach updating the user profile based on a document selected by the user from the search result documents, and wherein updating includes analyzing links within a document in the first set of documents and adding information derived from the analyzed links to the user profile.

However, Breese teaches presenting a ranked subset of documents to the user (see above) and updating user information according to the latest user provided information, such as particular site visits (e.g., col. 8, ll. 15-40). Thus, the document selected by a user could be one that was presented to the user. König teaches documents selected from the user and analyzing links within a selected document to update a user profile ("user model") because "during updating [of the user model], documents that are of interest to the user...are analyzed.... Through information extraction, links to other documents...are obtained.... Extracted information is processed to initialize or update the user representations in the User Model." (e.g., col. 17, l. 20 – col. 18, l. 9, also see the citations in the Prior Action for previous claim 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breese such that documents selected from the user from the set of search results are analyzed and information from links extracted from the documents are used to update the user profile, as claimed. The motivation for maintaining a User Model would have been to enhance the system's knowledge of the user's interests, as taught by König (see e.g., Summary), and as known to one of ordinary skill in the art.

Breese and König as applied above teach user information, documents visited by the user, and analyzing links, but do not expressly teach information derived from anchor text contained in documents that link to the documents visited by the user.

However, Li teaches information derived from anchor text contained in documents that link to a document (e.g., col. 9, ll. 7-12, col. 7, ll. 45-65, fig. 2 "Rule 6").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breese and Konig, such that the user information includes information derived from anchor text in documents that link to the documents accessed by the user. The motivation would have been to facilitate recognizing a popular and/or relevant page, as taught by Li (col. 7, ll. 45-65, col. 4, ll. 42-50) and known to one of ordinary skill in the art.

**Claims 19-20** are drawn to substantially the same subject matter as claims 4, 14, and 18 above, in addition to creating, which must happen in Konig in order to store the relevant data (see e.g., fig. 4).

**As to claim 22**, Breese as applied above further teaches wherein the documents visited by the user from which information is derived for use in a particular user's user profile is selected based on the user's activities when visiting the documents (e.g., col. 5, ll. 20-45).

**As to claim 23**, the "storing" limitation is addressed with respect to claim 15 above. Breese, as applied above, further teaches the retrieving including the user's user profile based on an identification number associated with the user and the user's profile (col. 5, ll. 23-30). Note that Breese must retrieve the data in order to process it.

**Claims 24, 27-30, 32-33, 35-46, 48-49, 51-58, and 60-62** are rejected based on the same reasoning as the above claims.

**5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breese, in view of Konig, further in view of Li and Gerace (U.S. Patent 5,848,396), hereinafter "Gerace."**

**As to claim 21**, Breese as applied above teaches wherein the user profile includes demographic information provided by the user (fig. 5), but Breese, Konig, and Li do not expressly teach geographic information.

However, Gerace teaches a user profile including both demographic and geographic information (col. 5, l. 63 – col. 6, l. 15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breese, Konig, and Li, such that geographic information is additionally stored with the user profile. The motivation would have been to store more information about the user to facilitate better decisions by the information retrieval system, as known to one of ordinary skill in the art.

**6. Claims 8, 34, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breese, in view of Konig, further in view of Li and Gabriel et al (U.S. Patent 6,584,468), hereafter “Gabriel.”**

**As to claim 8**, Breese, Konig, and Li do not expressly teach wherein the URLs further include URLs that have not been visited by the first user, but are related to the URLs that have been visited by the first user and the weight of an unvisited URL depends on its distance to at least one related URLs that have been visited.

However, Gabriel teaches wherein URLs include URLs that have not been visited by a user but are related to URLs visited by a user, and the weight of an unvisited URL depends on its distance to at least one related URLs that have been visited (col. 7, l. 37 – col. 9, l. 10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breese, Konig, and Li, such that the above claimed subject matter is implemented. The motivation would have been to facilitate indexing relevant information, as taught throughout Gabriel (e.g., Abstract, col. 7, ll. 37-40, col. 2, ll. 34-46).

**Claims 34 and 50** are rejected based on the same reasoning as claim 8, discussed above.

**7. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breese, in view of Konig, further in view of Li and Dumais et al (US 2004/0267700), hereafter “Dumais.”**

**As to claims 25-26**, Breese as applied above further teaches wherein the ranked set of documents comprises a personalized subset of documents ordered by personalized scores and the other subset ordered by the generic ranking scores (col. 7, ll. 33-36, fig. 2C). Furthermore, Breese teaches a set of documents ordered by their generic scores (see above).

Breese, Konig, and Li do not expressly teach the ranked set of documents comprising the above two sets of documents, and interleaving the two sets to form the ranked set of documents.

However, Dumais teaches interleaving results from a personal search engine and other search results for presenting to the user (para. 0029).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Breese, Konig, and Li, such that the ranked set



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of documents comprises the above two sets of documents, and the two sets are interleaved to form the ranked set of documents. The motivation would have been to create a personal browsing system to be a portal to all of a user's content, including personal information as well as more general resources, as taught by Dumais (para. 0029).

***Conclusion***

8. Applicant's arguments were fully considered but were not persuasive. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Lu whose telephone number is (571) 272-8594. The examiner can normally be reached on 8:30 - 5:00; M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached at (571) 272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Charles E Lu/  
Examiner, Art Unit 2161  
6/1/2009

/Apu M Mofiz/  
Supervisory Patent Examiner, Art Unit 2161